

A METHOD OF ESTABLISHING BI-DIRECTIONAL CONNECTIVITY OF A NETWORK ELEMENT IN A NETWORK

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ABSTRACT

15 The present invention describes a method and apparatus to ensure bi-directional connectivity between neighbor network elements in distance-vector protocol (e.g., EIGRP). The method further defines the dampening of neighbors that cannot establish a bi-directional connectivity. When a router receives an unreliable packet from a neighbor, the router adds the neighbor in neighbor table by gradually developing the reliability of the neighbor. First, the router adds neighbor's address into a dampening table and a 'neighbor pending' table. The router establishes a
20 reliable communication with the neighbor. If the router cannot establish the reliable communication with the neighbor, the router dampens the neighbor and removes neighbor's address from 'neighbor pending' table. When the router establishes a reliable communication with the neighbor, the router 'promotes' the neighbor to the neighbor table. The router does not 'advertise' neighbor in its neighbor table until the
25 neighbor is 'promoted' to the neighbor table.